

1    **SECTION 2-09, STRUCTURE EXCAVATION**

2    **September 30, 1996**

3    **2-09.2 Vacant**

4    This section is revised to read:

6    **2-09.2 Materials**

7    Materials shall meet the requirements of the following sections:

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9           Portland Cement	9-01
10          Fine Aggregate for Portland Cement Concrete	9-03.1(2)
11          Admixture for Concrete	9-23.6
12          Fly Ash	9-23.9
13          Water	9-25

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15   **2-09.3(1)E Backfilling**

16   The second paragraph is revised to read:

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18       **Alternative Sources.** When material from structure excavation is unsuitable for  
19   use as backfill, the Engineer may: require the Contractor to use other material  
20   covered by the contract if such substitution involves work that does not differ  
21   materially from what would otherwise have been required; require the Contractor  
22   to substitute selected material in accordance with Section 2-03.3(10); require the  
23   Contractor to use controlled density fill; or require the Contractor to obtain material  
24   elsewhere. Material obtained elsewhere will be paid for in accordance with  
25   Section 1-04.4.

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27   The following is inserted after the second paragraph:

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29       When specified in the contract or when approved by the Engineer, the Contractor  
30   shall supply controlled density fill as backfill material.

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32       Controlled density fill shall meet the following requirements:

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34                                   Controlled Density Fill

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36           Ingredients	Amount per Cu. Yd.
37           Portland Cement	50 lb.
38           Fine Aggregates Class 1 or 2	3300 lb. (3500 lb. if flyash class C is 39           used.)
40           Air Entrainment Admixture	Per Manufacturer's recommendations
41           Fly Ash Class F	300 lb.
42                    Class C	150 lb.
43           Water	300 lb. (maximum)

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45       The material consistency shall be flowable (approx. slump 3-10 inches). If  
46   requested by the Contractor, the proportions may be adjusted with the approval of  
47   the Engineer.

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49       The producer shall provide a Certificate of Compliance for each truckload of  
50   controlled density fill. The Certificate of Compliance shall verify that the delivered  
51   material is in compliance with the mix design and shall include:

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53           Agency Contract No.  
54           Date  
55           Truck No.

1                   Batched weights of each ingredient

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3                   The certification shall be signed by a responsible representative of the producer,  
4                   other than the driver, affirming the accuracy of the information provided.

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6                   The fifth paragraph is supplemented with the following:

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8                   4.    Compaction of controlled density fill will not be required.

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10                  **2-09.3(4) Construction Requirements, Structure Excavation, Class B**

11                  The first sentence of the third paragraph is revised to read:

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13                   If workers enter any trench or other excavation 4 feet or more in depth that does  
14                   not meet the open pit requirements of Section 2-09.3(3)B, it shall be shored or  
15                   other safety method constructed in conformance with WISHA requirements.

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17                  **2-09.4 Measurement**

18                  The ninth paragraph is revised to read:

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20                   **Gravel Backfill.** There will be no specific unit of measure for gravel backfill for  
21                   pipe bedding used in the installation of culvert and storm sewer pipes. All other  
22                   gravel backfill will be measured by the cubic yard in place determined by the neat  
23                   lines required by the Plans.

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25                  The 10th paragraph is revised to read:

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27                   **Shoring or extra excavation.** No specific unit of measurement shall apply to the  
28                   lump sum item of shoring or extra excavation Class A. Shoring or extra  
29                   excavation Class B will be measured by the square foot as follows:

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31                   The area for payment will be one vertical plane measured along the  
32                   centerline of the trench, including structures. Measurement will be made  
33                   from the existing ground line to the bottom of the excavation and for the  
34                   length of the work actually performed. If the contract includes a pay item for  
35                   grading to remove materials, the upper limit for measurement will be the neat  
36                   lines of the grading section shown in the Plans. The bottom elevation for  
37                   measurement will be the bottom of the excavation as shown in the Plans or  
38                   as otherwise established by the Engineer.

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40                  This section is supplemented with the following:

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42                   Controlled density fill will be measured by the cubic yard for the quantity of  
43                   material placed per the producer's invoice.

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45                  **2-09.5 Payment**

46                  This section is supplemented with the following paragraph after item 4.:

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48                   Payment for reconstruction of surfacing and paving within the limits of structure  
49                   excavation will be at the applicable unit prices for the items involved.

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51                  This section is supplemented with the following paragraph after item 7.:

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53                   All costs associated with furnishing and installing "Gravel Backfill for Pipe  
54                   Bedding" used in the installation of culvert and storm sewer pipes shall be  
55                   included in the unit contract price for the type and size of pipe installed.

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57                  This section is supplemented with the following:

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8. "Controlled Density Fill", per cubic yard.